

WHAT IS CLAIMED IS:

1. A semiconductor device comprising:

a semiconductor chip;

a plurality of leads arranged around the semiconductor chip;

terminals connected to the plural leads respectively;

a plurality of wires for connecting the semiconductor chip and the plural leads electrically with each other; and

a resin sealing member for sealing the semiconductor chip, the plural leads and the plural wires;

the terminals connected respectively to the plural leads being exposed to the exterior from a back surface of the sealing member,

wherein one ends of the plural leads are exposed to the exterior from side faces of the resin sealing member and are covered throughout the whole peripheries thereof with resin which constitutes the resin sealing member.

2. A semiconductor device according to claim 1, wherein the semiconductor chip is mounted over a die pad portion supported by a plurality of suspension leads, one end of each of the plural suspension leads is branched in the vicinity of a corner of the resin sealing member, the branched lead portions are exposed to side faces of the resin sealing member, and the whole peripheries of the exposed, branched lead portions are covered with the resin

which constitutes the resin sealing member.

3. A semiconductor device according to claim 1, wherein the semiconductor chip is mounted over a die pad portion supported by a plurality of suspension leads, one end of each of the plural suspension leads is exposed to the exterior from side faces of the resin sealing member at a corner of the resin sealing member, and the whole periphery thereof is covered with the resin which constitutes the resin sealing member.

4. A semiconductor device according to claim 2, wherein the plural suspension leads are each partially exposed to the exterior from a back surface of the resin sealing member.

5. A semiconductor device according to claim 1, wherein the terminals are respectively constituted such that portions of the leads are projected to the exterior from a back surface of the resin sealing member.

6. A semiconductor device according to claim 1, wherein the terminals are formed of an electrically conductive material different from the material of the leads.

7. A semiconductor device according to claim 2, wherein a back surface of the die pad portion is partially exposed to the exterior from a back surface of the resin sealing member.

8. A semiconductor device according to claim 1, wherein,

in each of the plural leads, the thickness of its portion positioned outside its terminal-connected portion is larger than its portion positioned inside its terminal-connected portion.

9. A semiconductor device according to claim 1, wherein the semiconductor chip is mounted over a sheet-like chip support, and the chip support is supported by a plurality of leads.

10. A semiconductor device according to claim 1, wherein the terminals are arranged zigzag in two rows along the sides of the resin sealing member.

11. A semiconductor device according to claim 3, wherein the area of the die pad portion is smaller than the area of the semiconductor chip.

12. A method of manufacturing a semiconductor device comprising: a semiconductor chip mounted on a die pad portion; a plurality of leads arranged around the semiconductor chip; terminals connected to the plural leads respectively; a plurality of wires for connecting the semiconductor chip and the plural leads electrically with each other; and a resin sealing member for sealing the die pad portion, the semiconductor chip, the plural leads and the plural wires, the terminals connected respectively to the plural leads being exposed to the exterior from a back surface of the sealing member,

the method comprising the steps of:

- (a) providing a lead frame formed with a plurality of patterns including the die pad portion and the plural leads;
- (b) mounting the semiconductor chip over said plural die pad portions formed on the lead frame and connecting the semiconductor chip and the plural leads with each other through wires;
- (c) thereafter, sandwiching the lead frame between an upper die half and a lower die half and injecting resin into a plurality of cavities formed between the upper and lower die halves to form a plurality of resin sealing members; and
- (d) thereafter, cutting the lead frame with a dicer to divide the plural resin sealing members into individual pieces,

wherein, at the time of cutting the lead frame with the dicer in the step (d), peripheral portions of the plural resin sealing members are each cut with the dicer to cover the whole peripheries of one end portions of the plural leads with the resin which constitute the resin sealing members, the plural leads being exposed to the cut faces of the resin sealing members.

13. A method according to claim 12, wherein the dicer has two dicing blades and cuts to-be-cut faces of mutually

adjacent said resin sealing members simultaneously.

14. A method according to claim 12, wherein the dicer has one dicing blade, the dicing blade having a width equal to the spacing between one to-be-cut face and the other to-be-cut face of mutually adjacent said resin sealing members.

15. A method according to claim 12, wherein one end of each of plural suspension leads which support the die pad portion is branched in the vicinity of a corner of each of the resin sealing member, and the whole peripheries of one ends of the plural suspension leads exposed to the cut faces of the plural resin sealing members are covered with the resin which constitutes the resin sealing member.